

# PATENT COOPERATION TREATY

1.0/0000/01047

**PCT**

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing: 08 March 2001 (08.03.01)	
International application No.: PCT/GB00/01844	Applicant's or agent's file reference: F.ERYRTLÜ 3
International filing date: 15 May 2000 (15.05.00)	Priority date: 31 August 1999 (31.08.99)
Applicant: ERYURLU, Faruk, Mehmet, Omer	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:  
11 November 2000 (11.11.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer:  J. Zahra Telephone No.: (41-22) 338.83.38
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## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference F.M.O.ERYURLU 3	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/01844	International filing date (day/month/year) 15/05/2000	Priority date (day/month/year) 31/08/1999
International Patent Classification (IPC) or national classification and IPC H04N7/64		
Applicant LUCENT TECHNOLOGIES INC		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  11/11/2000	Date of completion of this report  13.07.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  McGrath, S  Telephone No. +49 89 2399 8961 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/01844

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-6 as originally filed

**Claims, No.:**

1-5 as originally filed

**Drawings, sheets:**

1-2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/01844

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-5
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-5
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-5
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**Concerning Point V - Reasoned Statement**

The most relevant documents cited in the International Search Report:

- D1: US-A-5 488 618 discloses a decoder which detects errors by comparing estimated pixels (calculated using learnt coefficients) with actual signals. If the difference exceeds a threshold then a local error is determined.
- D2: US-A-5 627 590 discloses an arrangement at the coder side of detecting large interframe differences in interframe mode. When such differences are detected the mode is forced into intra mode which means that when errors do occur they are easier to correct/compensate at the decoder side.

The other documents concern error detection/ correction methods but which are more remote than D1 and D2 above.

None of the available prior art documents discloses the error detection technique claimed in claim 1 whereby interframe differences of macroblocks are detected and thresholded to detect whether interframe coding "should apply". This info is compared with data in the decoder indicating whether or not the last macroblock received was in interframe prediction format or not.

The subject-matter of claim 1 would therefore appear to meet the requirements of Articles 33(2) and 33(3) PCT.

Claims 2-5 contain modifications of the inventive idea embodied in claim 1 and would also appear to meet the requirements of Articles 33(2) and 33(3) PCT.

**Concerning Point VII - Certain Defects**

1. The requirements of Rule 6.3(b) PCT are not met since the independent claims are not properly cast in the two part form, according to which those features which in combination are part of the prior art are placed in the preamble.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/01844

2. The requirements of Rule 5.1(a)(ii) & (iii) PCT are not met since the background art, useful for understanding the invention, eg the documents mentioned above, have not been acknowledged in the description and the technical problems and any advantageous effects have not yet been stated in comparison to this background art.
3. The requirements of Rule 6.2(b) PCT are not met since reference signs are not used in the claims. It is considered that their presence would significantly aid the understanding of the claims.

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 March 2001 (08.03.2001)

PCT

(10) International Publication Number  
**WO 01/17271 A1**

(51) International Patent Classification<sup>7</sup>: H04N 7/64

Mehmet, Omer [TR/GB]; 6 Greensand Close, Swindon, Wiltshire SN2 3FW (GB).

(21) International Application Number: PCT/GB00/01844

(22) International Filing Date: 15 May 2000 (15.05.2000)

(74) Agents: WILLIAMS, David, J. et al.; Lucent Technologies UK Limited, 5 Mornington Road, Woodford Green, Essex IG8 OTU (GB).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 99306911.1 31 August 1999 (31.08.1999) EP

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(71) Applicant (*for all designated States except US*): LUCENT TECHNOLOGIES INC. [US/US]; 600 Mountain Avenue, Murray Hill, NJ 07974-0636 (US).

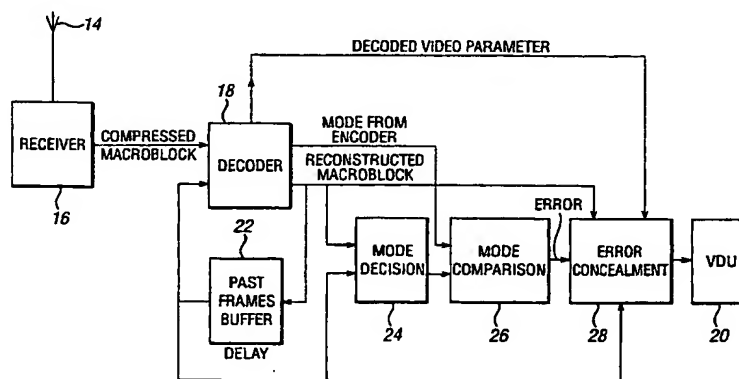
Published:  
— With international search report.

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): ERYURTLU, Faruk,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: VIDEO SIGNAL ERROR DETECTION SYSTEMS



(57) Abstract: Mobile phones now transmit video signals to each other. Such video signals are transmitted at a relatively slow bit rates. The signals transmitted are compressed using inter-frame prediction where sufficient similarity exists between successive picture frames. The receiver includes a decoder (18) which acts to reconstitute the compressed signals received using signals stored on a buffer (22) representing a previous picture frame. A mode decision circuit (24) compares the signal at the output of the decoder (18) with the previous signal stored in the buffer (22) and using the same decision criterion as used for the original compression generates a signal which indicates that either the signal is suitable for inter-frame prediction or not. This signal is then compared in a comparator (26) with the signal in the decoder (18) indicating whether or not the current signal was inter-frame predicted or not. If equality is not detected, then an error may have taken place. Then, error concealment techniques can be used to reduce the effects of the errors.

WO 01/17271 A1

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/01844

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04N7/64

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 488 618 A (KONDO TETSUJIRO ET AL) 30 January 1996 (1996-01-30) the whole document	1-5
Y	US 5 627 590 A (SAKAI KIYOSHI ET AL) 6 May 1997 (1997-05-06) column 4, line 40 - line 60 column 6, line 17 - line 53 column 7, line 8 - line 21; figure 5A	1-5
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 429 (E-0978), 14 September 1990 (1990-09-14) & JP 02 166892 A (MATSUSHITA ELECTRIC IND CO LTD), 27 June 1990 (1990-06-27) abstract	1-5

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

21 August 2000

Date of mailing of the international search report

05/09/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Foglia, P



# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/01844

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 016, no. 267 (E-1217), 16 June 1992 (1992-06-16) & JP 04 061582 A (NIPPON TELEGR & TELEPH CORP), 27 February 1992 (1992-02-27) abstract ----	1-5
A	WO 95 03674 A (BRITISH TELECOMM ;MURPHY ANGELA RUTH (GB); GUNBY STEPHEN RICHARD ( ) 2 February 1995 (1995-02-02) abstract; claims ----	1
A	US 4 498 104 A (SCHULZ AXEL) 5 February 1985 (1985-02-05) abstract; claims -----	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern:      al Application No

PCT/GB 00/01844

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5488618	A	30-01-1996	JP 7087481	A	31-03-1995
US 5627590	A	06-05-1997	JP 3002019	B	24-01-2000
			JP 5014392	A	22-01-1993
			CA 2073120	A,C	05-01-1993
			CA 2245053	A	05-01-1993
			DE 69225642	D	02-07-1998
			DE 69225642	T	12-11-1998
			EP 0521529	A	07-01-1993
			EP 0740471	A	30-10-1996
			US 5844628	A	01-12-1998
			US 5510839	A	23-04-1996
JP 02166892	A	27-06-1990	NONE		
JP 04061582	A	27-02-1992	JP 2877906	B	05-04-1999
WO 9503674	A	02-02-1995	AU 686198	B	05-02-1998
			AU 7192294	A	20-02-1995
			CN 1127578	A	24-07-1996
			DE 69413695	D	05-11-1998
			DE 69413695	T	18-03-1999
			EP 0710422	A	08-05-1996
			JP 9503890	T	15-04-1997
			NZ 268644	A	24-02-1997
			SG 47699	A	17-04-1998
			US 5745169	A	28-04-1998
US 4498104	A	05-02-1985	DE 3121599	A	23-12-1982
			JP 57203383	A	13-12-1982

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>F.ERYURLU 3</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 01844</b>	International filing date (day/month/year) <b>15/05/2000</b>	(Earliest) Priority Date (day/month/year) <b>31/08/1999</b>
Applicant <b>LUCENT TECHNOLOGIES INC</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

2

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/01844

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04N7/64

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

21 August 2000

Date of mailing of the international search report

05/09/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Foglia, P

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/01844

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A ✓	PATENT ABSTRACTS OF JAPAN vol. 016, no. 267 (E-1217), 16 June 1992 (1992-06-16) & JP 04 061582 A (NIPPON TELEGR & TELEPH CORP), 27 February 1992 (1992-02-27) abstract	1-5
A ✓	WO 95 03674 A (BRITISH TELECOMM ;MURPHY ANGELA RUTH (GB); GUNBY STEPHEN RICHARD ( ) 2 February 1995 (1995-02-02) abstract; claims	1
A ✓	US 4 498 104 A (SCHULZ AXEL) 5 February 1985 (1985-02-05) abstract; claims	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/01844

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5488618	A	30-01-1996	JP 7087481 A	31-03-1995
US 5627590	A	06-05-1997	JP 3002019 B	24-01-2000
			JP 5014392 A	22-01-1993
			CA 2073120 A,C	05-01-1993
			CA 2245053 A	05-01-1993
			DE 69225642 D	02-07-1998
			DE 69225642 T	12-11-1998
			EP 0521529 A	07-01-1993
			EP 0740471 A	30-10-1996
			US 5844628 A	01-12-1998
			US 5510839 A	23-04-1996
JP 02166892	A	27-06-1990	NONE	
JP 04061582	A	27-02-1992	JP 2877906 B	05-04-1999
WO 9503674	A	02-02-1995	AU 686198 B	05-02-1998
			AU 7192294 A	20-02-1995
			CN 1127578 A	24-07-1996
			DE 69413695 D	05-11-1998
			DE 69413695 T	18-03-1999
			EP 0710422 A	08-05-1996
			JP 9503890 T	15-04-1997
			NZ 268644 A	24-02-1997
			SG 47699 A	17-04-1998
			US 5745169 A	28-04-1998
US 4498104	A	05-02-1985	DE 3121599 A	23-12-1982
			JP 57203383 A	13-12-1982